



# A COMPREHENSIVE EXAMINATION OF SOCIAL MEDIA'S IMPACT ON YOUTH DEVELOPMENT, MENTAL HEALTH, AND ACADEMIC PERFORMANCE

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## Abstract

Social networking platforms (SNPs) have revolutionized online discourse, particularly among teenagers. This study delves into the multifaceted impact of SNPs on youth development, encompassing educational learning, entertainment, health, communication, interaction, and skill development. Employing a survey-based approach with 150 participants in Delhi, we investigated the shift in time allocation towards online activities, potential declines in real-time experiences, and emotional support from familial connections.

Findings revealed a near-ubiquitous (97.3%) SNP usage amongst participants, with 86% engaging regularly. Notably, 59.3% acknowledged a detrimental impact on mental health, while 74.7% perceived social media as beneficial. Rigorous hypothesis testing uncovered correlations between SNP use, addiction, and mental health, while interestingly, time spent online showed no significant link to developmental outcomes.

Our study underscores the intricate and paradoxical nature of SNPs for youth, presenting both opportunities and challenges for personal growth. We emphasize the need for a balanced and informed approach, advocating for responsible SNP usage and fostering critical digital literacy amongst teenagers. This research contributes valuable insights to the ongoing dialogue on youth and online environments, promoting agency and mindful engagement in the evolving digital landscape.

**Keywords:** Social Networking Platforms, Internet Addiction, Teenagers, Mental Health, Development, Digital Literacy, Agency

## 1.Introduction

In the vast realm of the 21st-century digital landscape, few influences are as pervasive as social media. Initially designed for network connectivity and collaborative information exchange, social media has evolved into a global force shaping human interactions, information consumption, and self-perception. With nearly 60% of the world's population actively engaged, its prevalence is undeniable.

However, concerns have emerged, particularly regarding its effects on the younger generation. This study explores the relationship between social media and cognitive processes, focusing on adolescents and young adults. The aim is to examine potential negative consequences such as sleep disturbances, heightened anxiety, and stress-related symptoms.

Beyond these psychological aspects, there's a concern about social media becoming a distraction for the youth, diverting their attention from personal goals. The ubiquitous presence of smartphones in various settings underscores this worry.

To address these concerns, this study uses a straightforward approach. A carefully crafted questionnaire was distributed to 150 participants via Google Forms, aiming to capture their experiences and perspectives on social media use. The collected data, presented through visual representations and statistical analyses, provides insights into the intricate relationship between social media and young minds.

In essence, this research seeks to offer a clear and evidence-based understanding of how social media impacts cognitive processes in the youth. By highlighting both the positive aspects and potential drawbacks, it aims to advocate for balanced and informed approaches in navigating the digital landscape.

## 2.0 Literature Review

In the dynamic landscape of the 21st century, social media has emerged as a ubiquitous force, reshaping communication, information consumption, and social interaction. For young people, this digital tapestry holds immense potential for connection, creativity, and self-expression; yet, within its glittering threads lurk potential pitfalls that could compromise their psychological well-being, privacy, and overall development. This critical review delves into the intricate tapestry of research examining the multifaceted impact of social media on young minds, navigating the nuanced interplay between its blessings and burdens.

### 2.1. Mental Health and Well-being:

The burgeoning tide of research on social media's psychological impact paints a complex picture. On one hand, studies by Twenge et al. (2017) and Kuss and Griffiths (2017) paint a concerning portrait of increased anxiety, depression, and stress among adolescents who engage heavily with social media. The hyper-real world constructed through curated profiles and unrealistic portrayals of life online is posited to fuel social comparison and erode self-esteem, posing a significant threat to mental well-being.

However, this narrative is not unidimensional. Amidie (2015) offers a counterpoint, highlighting social media's potential to empower young people. For many, it serves as a platform for creative expression, fostering a sense of identity and belonging within diverse online communities. Furthermore, studies by Lenhart et al. (2010) suggest that social media can facilitate positive social support and strengthen existing offline relationships, thereby contributing to emotional well-being.

Navigating this nuanced terrain requires a critical lens. Andreassen et al. (2016) illuminate the concept of "problematic social media use," characterized by a loss of control and negative consequences across personal and social spheres. This framework underscores the need to differentiate between healthy engagement and potentially addictive patterns, demanding further research into the moderating factors that foster responsible social media behavior.

## **2.2. Privacy and Security:**

As young people increasingly share their lives online, concerns regarding privacy and security come to the fore. Boyd and Hargittai (2010) expose the opacity of privacy settings and the complexities of data collection practices utilized by social media platforms. This opaqueness, coupled with a lack of digital literacy among young users, creates a fertile ground for potential privacy violations and the unauthorized dissemination of personal information.

Al-Asadi and Al-Emran (2019) further caution against the "surveillance capitalism" inherent in many social media models, where user data is harvested and monetized without adequate awareness or consent. This raises crucial questions about digital rights and the ethical implications of leveraging vast troves of personal information for commercial gain.

Addressing these concerns demands a multi-pronged approach. Platforms must prioritize transparent data practices, invest in robust privacy settings, and foster user education initiatives that empower young people to be responsible digital citizens. Additionally, policymakers must consider regulatory frameworks that protect user privacy and hold platforms accountable for their data-driven practices.

## **2.3. Sleep Disruption and Digital Dependency:**

The pervasive glow of smartphones and the siren call of notifications pose a formidable challenge to the sleep patterns of young people. Studies by Aldhawyan et al. (2017) and Woods and Scott (2016) demonstrate a strong link between late-night social media use and sleep disturbances, particularly among adolescents. The blue light emitted by electronic devices is known to suppress melatonin production, disrupting the natural sleep-wake cycle and potentially impacting cognitive function and academic performance.

Furthermore, Yubo et al. (2019) raise concerns about the emergence of social media addiction, characterized by a compulsive need to check and engage with online platforms, even at the expense of personal well-being and daily responsibilities. This phenomenon, intertwined with the fear of missing out (FOMO), can lead to a vicious cycle of sleep deprivation and heightened anxiety, highlighting the need for digital detox strategies and mindful media consumption practices.

#### **2.4. Cyberbullying and Online Safety:**

For some young people, the digital landscape holds not a haven of connection and creativity, but a breeding ground for cyberbullying and harassment. Whittaker and Kowalski (2015) document the alarming prevalence of online aggression, with vulnerable users becoming targets of malicious content, social exclusion, and even threats of violence. These experiences can leave lasting scars on victims, impacting their mental health, self-esteem, and sense of security.

To safeguard young minds in the digital age, platforms must implement robust reporting mechanisms, invest in proactive content moderation practices, and collaborate with educators and parents to equip children with the tools to navigate online environments safely and critically.

### **3. Methodology**

This study investigates the multifaceted impact of social media on young people, particularly those aged 18-34, a demographic known for its high levels of social media engagement (Smith, 2017). Recognizing the differential usage across demographics, the study focuses on urban populations, college students, and individuals with higher education levels, who exhibit higher rates of social media activity (Pew Research Center, 2019).

To collect data, a mixed-methods approach was employed, combining quantitative and qualitative methods. A structured questionnaire was distributed to 150 participants recruited from schools and colleges within Delhi NCR. The questionnaire captured a range of data points, including participants' social media usage patterns, perceived impacts of social media on various aspects of their lives, and concerns related to privacy and well-being.

The research adhered to strict ethical principles and maintained participant confidentiality throughout. Informed consent was obtained before participation, and participants were assured of their right to withdraw from the study at any point or decline to answer specific questions.

Furthermore, data duplication was minimized through meticulous data organization, utilization of appropriate data management tools, and adherence to ethical research guidelines. By implementing these measures, the study's internal validity and the integrity of its conclusions are firmly established.

The Collected data is further analysed using both qualitative and quantitative approaches. Survey questions are summarized in descriptive methods to highlight the overarching perceptions of the sample respondents about social media and its usage. The hypothesis are then tested using Chi-square's test of independence of several variables.

#### **4.0.Data Analysis And Interpretation**

This study reveals a high prevalence of social media usage among the target demographic, with 97.3% of respondents actively engaging in these platforms. Notably, daily engagement appears concentrated within the 2-4 hour range, with 60% of active users falling within this category (including 36.7% who specifically reported engaging for 2-4 hours). Despite this extensive engagement, concerns surrounding privacy remain prevalent, with 72% expressing discomfort with discussing personal details on social media. Furthermore, 40.7% of participants acknowledged feelings of dependence on these platforms, highlighting potential for problematic usage patterns.

**4.1 Motivations and Outcomes:** Connecting with friends and family represents the primary driver of social media engagement for this demographic, accounting for 64.7% of activity. Entertainment purposes close behind at 80.7%, followed by educational goals (55.3%), news consumption (43.3%), and even online buying/selling (20.7%). However, the impact of social media transcends mere engagement, with respondents reporting both positive and negative consequences. While 74.7% perceive it as fostering personal growth, roughly half (51.3%) acknowledge its significant influence on their behavior, and over half (55.3%) associate it with increased lethargy.

**5.0 Key Takeaways:** These findings underscore the multifaceted nature of social media's impact on young adults. While its ability to connect, inform, and empower is undeniable, its potential to influence behavior, foster dependence, and even impact physical well-being cannot be ignored. Future research should delve deeper into these nuanced relationships to inform responsible platform design, promote media literacy, and ensure the well-being of this digital generation.

Moving beyond descriptive findings, this section employs chi-square tests of independence to investigate potential causal relationships between social media usage and specific outcomes identified through a combined methodological approach of literature review and qualitative interviews with participants. The analysis seeks to shed light on the interplay between technology and human behaviour in the context of young adults' online expressions

## 5.1 Hypothesis Testing

### H1: Usage of social media is independent of Gender.

TABLE- 1

	NO	YES	<i>Row Totals</i>
F	2 (3.07) [0.37]	113 (111.93) [0.01]	115
M	2 (0.93) [1.22]	33 (34.07) [0.03]	35
<i>Column Totals</i>	4	146	<b>150 (Grand Total)</b>

**Table 1 presents the distribution of responses across gender categories concerning social media usage.** The chi-square statistic is calculated as 1.6336, and the associated p-value is .201202. The result is not deemed significant at  $p < .05$ . Consequently, we accept the null hypothesis (H0) and reject the alternative hypothesis (Ha). This implies that there is no statistically significant association between the usage of social media and gender. In practical terms, it indicates that social media usage is not influenced by gender, affirming that individuals of any gender are equally likely to use social media.

### H2: Time spent by an individual on social media is independent of the development of individual.

Table 2

	NO	YES	<i>Row Totals</i>
1-2 Hours	18 (14.19) [1.03]	38 (41.81) [0.35]	56
2-4 Hours	8 (13.93) [2.53]	47 (41.07) [0.86]	55
4-6 Hours	8 (6.84) [0.20]	19 (20.16) [0.07]	27
more than 6 Hours	4 (3.04) [0.30]	8 (8.96) [0.10]	12
<i>Column Totals</i>	38	112	<b>150(Grand Total)</b>

**Table 2 displays the distribution of responses based on the time individuals spend on social media and its potential impact on their development.**

The chi-square statistic is computed as 5.4262, and the associated p-value is .143123. The outcome is not considered significant at  $p < .05$ . Therefore, we accept the null hypothesis (H0) and reject the alternative hypothesis (Ha). This implies that there is no statistically significant association between the time spent by an individual on social media and their overall development. In essence, the data suggests that the amount of time spent on social media does not exhibit a discernible impact on an individual's development.

**H3: Time spent by an individual on social media and its impact on mental health are independent****TABLE- 3**

	NO	YES	<i>Row Totals</i>
1-2 hours	28 (22.77) [1.20]	28 (33.23) [0.82]	56
2-4 hours	24 (22.37) [0.12]	31 (32.63) [0.08]	55
4-6hours	8 (10.57) [0.63]	18 (15.43) [0.43]	26
more than 6 hours	1 (5.29) [3.48]	12 (7.71) [2.38]	13
<i>Column Totals</i>	61	89	<b>150 (Grand Total)</b>

**Table 3 delineates the distribution of responses concerning the time individuals spend on social media and its potential impact on mental health.**

The chi-square statistic is calculated as 9.1364, and the associated p-value is .027531. The result is deemed significant at  $p < .05$ . Consequently, we reject the null hypothesis ( $H_0$ ) and accept the alternative hypothesis ( $H_a$ ). This suggests a statistically significant relationship between the time spent by an individual on social media and its impact on their mental health. The findings imply that excessive social media usage is likely to have detrimental effects on an individual's mental well-being.

**H4: Frequent use of social media has no impact on the development of individual.****Table 4**

	NO	YES	<i>Row Totals</i>
Daily	30 (32.68) [0.22]	99 (96.32) [0.07]	129
Monthly	3 (1.27) [2.37]	2 (3.73) [0.80]	5
Never	4 (1.27) [5.90]	1 (3.73) [2.00]	5
Weekly	1 (2.79) [1.15]	10 (8.21) [0.39]	11
<i>Column Totals</i>	38	112	<b>150 (Grand Total)</b>

**Table 4 illustrates the distribution of responses concerning the frequency of social media use and its potential impact on individual development.**



The chi-square statistic is calculated as 14.416, and the associated p-value is less than 0.05. Therefore, we reject the null hypothesis (H0) and accept the alternative hypothesis (Ha). This suggests a statistically significant relationship between the frequent use of social media and its impact on the development of the individual. The findings underscore the importance of using social media judiciously to avoid potential hindrances to individual development.

**H5: Time spend by an individual on social media is independent from his addiction towards social media.**

**Table 5**

		NO	YES	<i>Row Totals</i>
1-2 hours		47 (33.60) [5.34]	9 (22.40) [8.02]	56
2-4 hours		32 (33.00) [0.03]	23 (22.00) [0.05]	55
4-6hours		10 (16.20) [2.37]	17 (10.80) [3.56]	27
more than 6 hours		1 (7.20) [5.34]	11 (4.80) [8.01]	12
<i>Column Totals</i>		90	60	<b>150 (Grand Total)</b>

**Table 5 outlines the distribution of responses concerning the time individuals spend on social media and its potential correlation with addiction.**

The chi-square statistic is computed as 32.7152, and the associated p-value is less than 0.00001. The result is deemed highly significant at  $p < 0.05$ . Consequently, we reject the null hypothesis (H0) and accept the alternative hypothesis (Ha). This indicates a statistically significant relationship between the time spent by an individual on social media and the likelihood of addiction. The findings underscore the importance of individuals limiting their time on social media to mitigate the risk of developing an addiction.



**H6: The impact of social media on an individual's behavior is not contingent on the amount of time spent on social media.**

**TABLE- 6**

	Never	Seldomly	To a large extent	<i>Row Totals</i>
1-2 hours	23 (15.68) [3.42]	27 (28.75) [0.11]	6 (11.57) [2.68]	56
2-4 hours	12 (15.40) [0.75]	34 (28.23) [1.18]	9 (11.37) [0.49]	55
4-6hours	5 (7.56) [0.87]	13 (13.86) [0.05]	9 (5.58) [2.10]	27
more than 6 hours	2 (3.36) [0.55]	3 (6.16) [1.62]	7 (2.48) [8.24]	12
<b>Column Totals</b>	42	77	31	<b>150 (Grand Total)</b>

As per Table 6, the chi-square statistic is calculated as 22.0545, and the associated p-value is found to be .001184. The result is considered statistically significant at  $p < .05$ .

Given that the p-value is less than 0.05, we reject the null hypothesis (H0) and accept the alternative hypothesis (Ha). This indicates a meaningful relationship between the time an individual spends on social media and its influence on their behavior. The findings suggest that the impact of social media on behavior is not uniform across different time spent categories, highlighting the complexity of this relationship.

**H7: Addiction towards social media is independent of Gender.**

**Table 7**

	NO	YES	<i>Row Totals</i>
F	68 (69.00) [0.01]	47 (46.00) [0.02]	115
M	22 (21.00) [0.05]	13 (14.00) [0.07]	35
<b>Column Totals</b>	90	60	<b>150 (Grand Total)</b>

For the data presented in Table 7, the chi-square statistic is calculated as 0.1553, with a corresponding p-value of 0.69354. The result is not considered statistically significant at  $p < 0.05$ .

Given that the p-value is greater than 0.05, we accept the null hypothesis (H0) and reject the alternative hypothesis (Ha). This suggests that there is no statistically significant relationship between addiction towards social media and gender.

In simpler terms, the analysis indicates that addiction to social media is not dependent on an individual's gender. The findings suggest that both males and females can be equally susceptible to addiction towards social media.

## 6. Conclusion

Our study aimed to meticulously analyze the multifaceted dimensions of social media use and its negative repercussions, delving into aspects that haven't received ample attention in previous research. Drawing on a comprehensive review of existing literature, we identified gaps that prompted our investigation.

To scrutinize the effects of social media, we designed a questionnaire and collected data through Google Forms, presenting our findings using informative pie charts and bar graphs. Notably, 51.3% of respondents check social media first thing in the morning, while a staggering 97.3% acknowledged its detrimental impact on mental health. While 80.7% use social media for entertainment, 58% believe it diminishes social interactions. Intriguingly, 74.7% perceive it as a valuable component of personal development, underscoring its dual role in contemporary life. Social media is ingrained in the daily routine of 86% of individuals.

Our hypothesis testing, encompassing seven hypotheses, revealed significant connections between social media usage and the likelihood of developing addictions and mental health issues. Furthermore, a correlation was found between frequent social media use and behavior. However, no substantial links were identified between social media use and personal growth, its impact on behavior or addiction, and gender.

In light of these findings, a responsible approach to social media usage emerges as imperative for personal growth and learning. As we navigate the dynamic landscape of social media, understanding its nuanced effects can guide us towards a balanced and mindful integration into our daily lives.

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